Fig. 1. Comparison of 4 DPD primer/probe sets for their ability to amplify DPD mRNA.

DPD Gene expression detection using various primer/probe sets in Formalin Fixed paraffin embedded tissue

▨ DPD 1   ■ DPD 2   ■ DPD 3A   □ DPD 3B

	1	2	3	4	5	6	7	8	9	10
□ DPD 1	4.7	7.4	0	0	0	2.08	2.83	2.01	0.55	0.7
■ DPD 2	0	0	0	0	0	2.23	1.54	0.67	1.1	0.88
■ DPD 3A	14.7	20.4	21.3	30.5	0.53	10.3	2.67	11.4	3.86	4.01
□ DPD 3B	10.4	0	8.9	14.3	1.32	1	6.36	3.32	1.01	0.76

Sample #
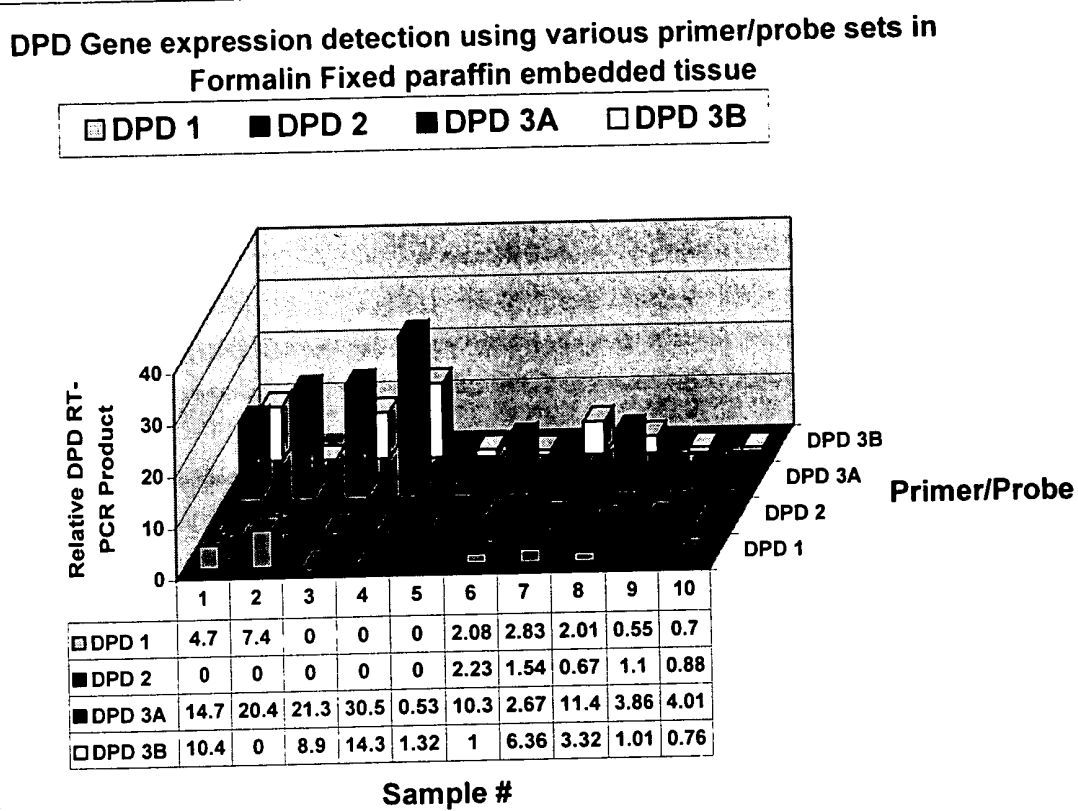
Fig. 2. Comparison of amplification efficiency of primer/probe DPD 3A and DPD 1 to amplify DPD mRNA from frozen tissue.

DPD Gene Expression Using DPD1 and DPD3a primer/probe sequences in Frozen tissue

Relative DPD RT-PCR product

	1	2	3
Mean DPD1	1935	3803	455
Mean DPD3a	3537	9009	1063

Control Samples
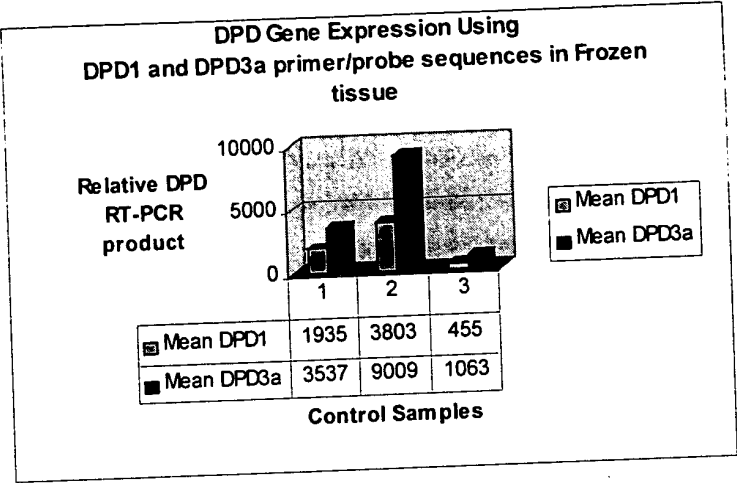
Figure 3. Chart illustrating how to calculate *DPD* expression relative to an internal control gene

	Sample	from "test" reactions				from "calibration" reactions				Uncorrected Gene Expression (UGE) $2^{-\Delta\Delta t}/2^{-\Delta ct}$	Published DPD values	Derivation of K_{DPD} (average K)		Relative DPD exp.
		C_T DPD	C_T β-actin	ΔC_T	$2^{-\Delta t}$	C_T Calib.RNA	C_T β-actin	ΔC_T	$2^{-\Delta Ct}$			K	K_{DPD}	
Experimental	unknown 1	25.01	19.84	5.21	0.027	-	-	-	-	4.47	-		1.08	4.83
	unknown 2	28.18	18.76	9.42	0.0015	-	-	-	-	0.241	-		1.08	0.2608
	Calib. RNA	-	-	-	-	27.94	26.92	19.55	7.37	0.006/0.006=1				
From Published Data	L7	31.04	24.56	6.49	0.0111	-	-	-	-	2.45	2.70	1.10	1.08	-
	L91	27.95	20.5	7.45	0.0057	-	-	-	-	1.26	1.20	1.08	1.08	-
	L121	26.88	19.2	7.68	0.00488	-	-	-	-	1.07	1.10	1.02	1.08	-
	L150	33.32	22.88	10.44	.00072	-	-	-	-	0.158	0.17	1.08	1.08	-
	L220	26.96	22.01	4.95	0.03235	-	-	-	-	7.12	7.3	1.03	1.08	-
	L164	25.44	21.4	4.04	0.0607	-	-	-	-	13.38	16	1.2	1.08	-
	Calib. RNA	-	-	-	-	27.88	20.98	77.82	0.005	0.005/0.005=1	-	-	-	-